

Q 1 Decrease in velocity per unit time is called

A acceleration

B positive acceleration

C deceleration

D uniform acceleration

< Previous Question

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Q 2

The black body always _____ radiations

A

emit

B

absorb

C

both a and b

D

reflects

1

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Q 3

When an ideal gas of constant mass is heated in a container of fixed volume. What is the reason for the increase in pressure of the gas?

- A number of molecules per unit volume increases
- B molecules occupy greater volume of the container
- C average force per impact at the container wall increases
- D molecules collide with each other with greater force

2

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Q 4

The value for ϵ_r for air is:...

A

1.6

B

1.06

C

1.006

D

1.0006

3

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Q 5

Magnetic field along the axis of solenoid with n turns per unit length carrying current I is given by

A

$$B = \mu_0 n I$$

B

$$B = \mu_0 N / L$$

C

$$B = \mu_0 I N$$

D

$$B = \mu_0 I N L$$

4

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Q 6

Centrifuge is used to purify

A

U

B

H

C

O

D

N

5

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Q 7

A current of 5A flows in a resistor of 2 ohms. Calculate the energy dissipated in 300 seconds in the resistor.

A

5KJ

B

10KJ

C

15KJ

D

20 KJ

6

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Q 8

Half wave rectifier uses

A

one diode

B

two diode

C

three diodes

D

Four diodes

7

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Next Question 

Q 9

Work done by friction

A

can be zero

B

can be positive

C

can be negative

D

all of these

8

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Q 10

As the wavelength of light used increases, the distance between bright fringes in the interference pattern:....

A increases

B decreases

C remains same

D none of these

9

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Q 11

A fraction of internal energy is due to the molecular vibration, which is different in different states of matter. Which of the following gives the correct order of fraction of internal energy due to molecular vibration?

A solid > gas > liquid

B gas > liquid > solid

C solid > liquid > gas

D gas > liquid > solid

10

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Q 12

_____ are such nuclei of an element that have the same atomic number Z , but have different mass number A

A isotopes

B isobars

C isomers

D isotherms

11

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Q 13

One radian is equal to:

A

57.3 degrees

B

47.3 degrees

C

67.5 degrees

D

59.5 degrees

12

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Next Question 

Q 14

Which group consists of only electromagnetic waves:

A

microwaves, radio waves, infra red

B

microwaves, radio waves, sound

C

microwaves, water waves, infra red

D

n/a

13

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Q 15

Motional emf induced in a coil is dependent on

A

Magnetic field

B

orientation

C

length

D

all of these

14

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Next Question 

Q 16

The maximum velocity of SHM is a_0 the period of oscillation is

A

$$2\pi x_0/a_0$$

B

$$2\pi a_0/x_0$$

C

$$2\pi a_0 x_0$$

D

$$2\pi/a_0 x_0$$

15

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Q 17

The electric intensity between two oppositely charged electric plates is:....

A

$$E = \epsilon_0 / \sigma$$

B

$$E = \sigma + \epsilon_0$$

C

$$E = \sigma / \epsilon_0$$

D

$$E = \sigma \epsilon_0$$

16

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Q 18

A charge of 2 C placed in electric field of 10 N/C what will be the work done in moving charge a distance of 5 m

A

100 J

B

50 J

C

150 J

D

200 J

17

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Next Question 

Q 19

When the length of the conductor is doubled and the area of cross-section remains the same then its resistance

A

Remains the same

B

Will be doubled

C

Will become half

D

Will increase by four times

18

SKIPPED QUESTIONS 

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Q 20

Determine the angular velocity if 4.8 revolutions are completed in 4 seconds

A

9.6 radians/sec

B

7.5 radians/sec

C

8 radians/sec

D

0.96 radians/sec

19

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Q 21

You have three capacitors, each of $2\ \mu\text{C}$. In which of the following combinations of the three capacitors, the resultant capacitance is $6\ \mu\text{C}$?

A

all three capacitors in series

B

two capacitors are in series, one in parallel

C

two capacitors are in parallel, one in series

D

all three capacitors in parallel

20

SKIPPED QUESTIONS 

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Next Question 

Q 22

Which of the following can have negative temperature coefficient?

A

Compounds of silver

B

Liquid metals

C

Metallic alloys

D

Electrolytes

21

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Q 23

An a.c. generator consists of a coil of 50 turns and an area 2.5 m^2 rotating at an angular speed of 60 rad s^{-1} in a uniform magnetic field of 0.3 T between two fixed pole pieces. What is the flux through the coil, when the current is zero

A Maximum

B Minimum

C Zero

D Independent

22

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Q 24

Isothermal system has constant

A

Temperature

B

Pressure

C

Entropy

D

Energy Conservation

23

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Q 25

Magnetic field lines form _____ loops from pole to pole.

A

open

B

closed

C

branched

D

opened or closed

24

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Q 26

A 4kg eagle picks up a 75g snake and raises it 2.5 m from the ground to a branch. What is the work done by the eagle on the snake? (Assume $g = 10 \text{ m/s}^2$)

A 100 J

B 1.875 J

C 18.75 J

D 187.5 J

25

SKIPPED QUESTIONS 

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Q 27

Transformer is used in rectification to _____ the supply voltage

A

step up

B

step down

C

equalize

D

none of them

26

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Q 28

What is 30 degrees in radians?

A

$\pi/3$

B

$\pi/6$

C

$\pi/2$

D

$\pi/4$

27

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Q 29

A particle moves from point $P(1,2,3)$ to $Q(2,1,4)$ under the action of a constant force $F = (2\mathbf{i} + \mathbf{j} + \mathbf{k})$, work done by force is

A 2 J

B 4 J

C 16 J

D 8 J

28

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Next Question 

Q 30

Electrostatic force is

A

Nonconservative

B

Conservative

C

depends on shape of charge

D

None of these

29

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Next Question 

Q 31

The stationary waves can be set up on the string only with the frequencies of harmonic series determined by:

A the tension, length and mass per unit length of the string

B the tension and mass per unit length of the string only

C the length and mass per unit length of the string only

D the tension and length of the string only

30

SKIPPED QUESTIONS 

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Q 31

The stationary waves can be set up on the string only with the frequencies of harmonic series determined by:

A the tension, length and mass per unit length of the string

B the tension and mass per unit length of the string only

C the length and mass per unit length of the string only

D the tension and length of the string only

30

SKIPPED QUESTIONS 

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Q 32

What is angular velocity?

A

Change in angular rotation / change in time

B

Change in displacement / change in time

C

Change in speed / change in time

D

Change in acceleration / change in time

31

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Q 33

Consider a peak rectifier fed by a 60-Hz sinusoid having a peak value $V_p = 100$ V. Let the load resistance $R = 10$ k Ω . Calculate the fraction of the cycle during which the diode is conducting

A 1.06 %

B 2.06%

C 3.18 %

D 4.82%

32

SKIPPED QUESTIONS 

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Next Question 

Q 34

Which of the following is the statement of first law of thermodynamics?

A

difference between heat given to the system and work done by the system appears as internal energy of the system

B

difference between work done and change in internal energy is equal to the heat absorbed by the system

C

sum of heat absorbed and the increase in internal energy is equal to the work done by the system

D

sum of heat absorbed and the work done by the system is equal to the decrease in internal energy of the system

33

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Q 35

Speed of the sound, v , in a medium of elastic modulus E and density d , is given by:

A

$$v = E/d$$

B

$$v = E \cdot d$$

C

$$v^2 = E \cdot d$$

D

$$v^2 = E/d$$

34

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Q 36

The half life of radioactive element is

A

$$0.693\lambda$$

B

$$0.693/\lambda$$

C

$$\lambda/0.693$$

D

$$1/\lambda$$

35

SKIPPED QUESTIONS 

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Q 37

Whenever a transverse wave travelling in a denser medium, is reflected from the boundary of the rarer medium...

- A An incident crest on reflection disappears
- B An incident trough on reflection becomes double
- C An incident crest on reflection becomes a trough
- D An incident crest on reflection remains crest

36

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Next Question 

Q 38

If the length of a potentiometer wire is doubled, the accuracy in determining the null point_____

A

is increased

B

is decreased

C

remains constant

D

may increase or decrease

37

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Q 39

Energy stored inside the inductor is given by

A

$$\frac{1}{2}LI^2$$

B

$$LI^2$$

C

$$\frac{3}{2}LI^2$$

D

$$LI$$

38

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Q 40

The coupling coefficient of perfectly coupled coil is

A

zero

B

1

C

more than 1

D

infinite

39

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Q 41

The distance between two consecutive nodes in a stationary wave is equal to:

A

one wavelength

B

2.5 wavelength

C

3 wavelength

D

half wavelength

40

SKIPPED QUESTIONS 

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Q 42

If two bodies have same temperature the rate of heat transfer between them is

A

infinite

B

zero

C

double the temperature

D

none of these

41

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Q 43

Bright Lines in pattern shows

A

absorption

B

emission

C

release

D

free particle

42

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Next Question 

Q 44

If a photon is absorbed by a nucleus the energy of nucleus

A

remain same

B

increase slightly

C

decrease slightly

D

it will pass the nucleus

43

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Q 45

Nucleus absorbs

A

x rays

B

beta rays

C

gamma rays

D

all of these

44

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Next Question 

Q 46

The total mass of protium deuterium and tritium is ____ than three H atoms

A 3 neutrons

B 3 protons

C 3 electrons

D none of these

45

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Q 47

A container is filled with oxygen and helium at the same temperature. The molar mass of oxygen is 32 g/mol and that of helium is 4 g/mol. What is the ratio: average speed of oxygen molecules -----
----- average speed of helium molecules

A $1 \text{ --- } \sqrt{8}$

B $\sqrt{8}$

C $1 \text{ --- } 8$

D 8

46

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Q 48

Laser light is a type of

A spontaneous

B stimulated

C both a) and b)

D None of these

47

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Q 49

The energy input to an engine is 60 J, and the work it performs is 15 J. What fraction of the energy input is expelled to the cold reservoir?

A

0.25

B

75%

C

1

D

impossible to determine

48

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Next Question 

Q 50

Vector is quantity which

A

has direction

B

has magnitude

C

follow rules of vector addition

D

both direction and magnitude

49

SKIPPED QUESTIONS 

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Next Question 

Q 51

To get a peak load voltage of 40V out of a bridge rectifier, what should be the approximate rms value of secondary voltage?

A 0V

B 14.4V

C 28.3V

D 56.6V

50

SKIPPED QUESTIONS 

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Next Question 

Q 52

A stationary wave is formed in a pipe which is open at both ends. If length of pipe is 10 cm, then what is the maximum possible wavelength of the wave.

A 20 cm

B 5 cm

C 10 cm

D 30 cm

51

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Q 53

After certain lapse of time, the fraction of radioactive polonium is found to be 12.5% of initial quantity. If the half life of polonium is 138 days, then duration of time lapse is.....days

A 34.5

B 276

C 414

D 125

52

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Next Question 

Q 54

1 weber is equal to

A

10 Gauss

B

10^8 Maxwell

C

10^{-4} Gauss

D

10^4 Maxwell

53

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Next Question 

Q 55

In a periodic wave, the distance between second and fifth crests is 15 cm, what is the wavelength of the wave?

A 45 cm

B 5 cm

C $\frac{1}{5}$ cm

D $\frac{1}{3}$ cm

54

SKIPPED QUESTIONS 

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Q 56

Steady current does not change with respect to _____.

A conductor

B source

C time

D potential difference

55

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Next Question 

Q 57

Lymph nodes may be located in the human body in the tissues of the:

A

stomach

B

thyroid gland

C

brain

D

groin and neck

56

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Next Question 

Q 58

A condition with abnormal amount of fats is called:

A

anorexia

B

botulism

C

piles

D

obesity

57

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Next Question 

Q 59

The first layer of cell wall which is formed is called?

A

primary wall

B

secondary wall

C

middle lamella

D

all of these

58

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Next Question 

Q 60

A neural pathway that controls an action reflex is called:

A Nerve cell

B reflex arc

C Receptor cells

D Mixed nerve

59

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Next Question 

Q 61

In enzymatic mechanism, the substrate bind to enzyme active site to produce?

A reactants

B enzymes

C products

D all of these

60

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Q 62

A structural component that is found in all viruses is?

A

envelope

B

DNA

C

Capsid

D

Tail Fibers

61

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Next Question 

Q 63

Which of the following carbohydrate is a tasteless molecule?

A

Monosaccharides

B

Oligosaccharides

C

Polysaccharides

D

carbohydrates

62

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Next Question 

Q 64

What are Autophagosomes?

A

Those lysosomes which eat parts of their own cells to generate energy.

B

Those lysosomes which eat old and worn out cellular organelles.

C

Lysosomes which help in extracellular digestion

D

both a and b

63

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Q 65

Which of the following is a chemical link between catabolism and anabolism?

A

AMP

B

ATP

C

ADP

D

All of these

64

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Q 66

Irreversible modifications require the synthesis of which of the following?

A

enzymes

B

carbohydrates

C

vitamins

D

proteins

65

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Next Question 

Q 67

Some bacteria ranging occasionally a size of 500 um in length are which of the following?

A Escherichia coli

B Mycoplasma

C Epulopiscium

D Spirochetes

66

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Q 68

The only aquatic arthropods:

A

Crustaceans

B

Arachnids

C

Myriapods

D

Gastopods

67

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Q 69

When resources gets scarce, the population growth?

A

becomes fast

B

slows down

C

remains same

D

none of these

68

SKIPPED QUESTIONS 

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Next Question 

Q 70

Chromosomes that have different alleles of a given gene at locus is called?

A homozygous

B X chromosomes

C Y chromosomes

D heterozygous

69

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Q 71

A neuron located in the central nervous system that projects its axon outside the CNS is called:

A Motor nerve

B sensory nerve

C Both A and B

D Mixed nerve

70

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Next Question 

Q 72

What is the function of the fluid secreted by sertoli cells?

A

provides liquid medium

B

Provides protection to sperms

C

Provides nourishment to sperms

D

All A,B and C are correct

71

SKIPPED QUESTIONS 

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Next Question 

Q 73

All the animals of the grade radiata are which of the following?

A Unicellular

B Triploblastic

C both a and b

D Diploblastic

72

SKIPPED QUESTIONS 

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Q 74

Which of the following changes length during sarcomere contraction?

A Thick filaments

B Thin filaments

C H zone

D all of these

73

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Q 75

HIV AIDS is caused by which viruses?

A

human immunodeficiency virus

B

retroviruses

C

influenza Virus

D

paramyxoviruses

74

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Next Question 

Q 76

First Actions spectrum was obtained by using?

A

Algae

B

Fungi

C

Bacteria

D

Spirogyra

75

SKIPPED QUESTIONS 

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Next Question 

Q 77

Which of the following is a form of asexual reproduction in prokaryotic cells?

A Binary fission and mitosis

B Binary fission and meiosis

C Binary fission and transformation

D Binary fission

76

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Q 78

Refers to the final changes within an immature virion that result in an infectious virus particle

A

assembly

B

coating

C

integration

D

maturation

77

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Q 79

Which of the following is inherited via an autosomal recessive allele?

A

Hemophilia

B

Color-blindness

C

Huntington's disease

D

Cystic fibrosis

78

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Q 80

Most reflex arcs are:

A

Monosynaptic reflex

B

Polysynaptic reflex

C

Hemi Synaptic reflex

D

None of these

79

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Next Question 

Q 81

The brain is protected and brain tissue is provided with nutrients and oxygen by?

A

cranium

B

meninges

C

skull

D

ventricles

80

SKIPPED QUESTIONS 

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Next Question 

Q 82

Which of the following is the key function of pleural cavity?

A Reduces friction between membranes

B Slide easily on one another

C allows membrane to adhere on one another

D all of these are correct

81

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Next Question 

Q 83

The calvin cycle begins when carbon dioxide reacts with?

A

NAD

B

ADP

C

FADH

D

RUBP

82

SKIPPED QUESTIONS 

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Next Question 

Q 84

What type of bonds exist between an enzyme and its prosthetic group?

A

Ionic

B

Covalent

C

Hydrogen

D

Metallic

83

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Next Question 

Q 85

Which lobe is the back part of the brain that is involved with vision?

A

Frontal

B

Parietal

C

Temporal

D

Occipital

84

SKIPPED QUESTIONS 

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Next Question 

Q 86

Spirochete is an example of which type of bacteria?

A

aerobic

B

facultative

C

anaerobic

D

both a and b

85

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Q 87

All DNA virus replicate in the nucleus?

A

yes all

B

no

C

yes but some exceptions

D

they replicate in cytoplasm

86

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Q 88

Upon increasing the temperature the shape of enzyme's active site?

A

remains same

B

changes

C

adopts a geometric conformation

D

denatures

87

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Q 89

Medulla, pons and cerebellum are found in which brain part?

A

Corpus callosum

B

Hindbrain

C

Forebrain

D

Midbrain

88

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Next Question 

Q 90

The place of centromere where spindle fibres get attached is?

A

Kinetochore

B

telomere

C

Centromere region

D

all of these

89

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Next Question 

Q 91

The enzyme involved in splitting or formation of C-C bond is called?

A oxidases

B dehydrogenases

C transglycosidases

D desmolases

90

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Next Question 

Q 92

This group of animals has three bones in the ear.

A

Reptiles

B

Mammals

C

Both reptiles and mammals

D

Birds and mammals

91

SKIPPED QUESTIONS 

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Q 93

The M-line is part of the cytoskeleton that stabilizes each:

A Microtubules

B sarcolemma

C Sarcomere

D None of these

92

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Next Question 

Q 94

Cofactors can be divided into how many groups?

A

2

B

4

C

6

D

8

93

SKIPPED QUESTIONS 

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Next Question 

Q 95

Spermatids differentiate into:

A

Spermatozoa

B

secondary spermatocyte

C

primary oocyte

D

mature sperms

94

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Q 96

The mobility of integral proteins can be measured by physical state of which of the following?

A

amino acids

B

external phospholipids

C

membrane phospholipids

D

membrane appendages

95

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Q 97

Cells release various cellular secretions to facilitate bodily functions. Most of the cellular secretions are?

A Glycoproteins

B glycolipids

C Nucleohistones

D Carbohydrates

96

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Q 98

Which of the following is universal donor?

A

A

B

B

C

AB

D

O

97

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Q 99

Which group of animals is not a deuterostome?

A

Echinodermata

B

Arthropoda

C

Mollusca

D

Both B and C

98

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Next Question 

Q 100

In this stage of photosynthesis, ATP and NADPH converted to ADP+Pi and NADP+

A light dependent reaction

B light independent reaction

C both of these

D none of above

99

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Next Question 

Q 101

What is the least common electron transport chain?

A non-cyclic electron flow

B cyclic electron flow

C circular electron flow

D both b and c

100

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Next Question 

Q 102

Identify the characteristic of acoelomates?

A

Absence of mesoderm

B

Absence of brain

C

Coelom that is incompletely lined with a mesoderm

D

Solid body without a cavity surrounding internal organs

101

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Q 103

Which of the following constitute large organic molecules?

A Cellulose

B glucose

C amino acids

D all of these

102

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Q 104

Which of the following organelles is not bound by a membrane?

A ribosomes

B ER

C Mitochondria

D nucleus

103

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Next Question 

Q 105

How are high energy phosphate bonds broken down in ATP?

A anabolism

B catabolism

C hydrolysis

D all of these

104

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Next Question 

Q 106

Prokaryotes are considered to be evolved how many years ago?

A 1.5 billion years ago

B 4.5 billion years ago

C 1000 million years ago

D 3.5 billion years ago

105

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Next Question 

Q 107

Which is an organelle that helps the sperm to penetrate the ovum?

A

Megalis

B

Zona pellucida

C

Acrosome

D

both a and b

106

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Next Question 

Q 108

Each Kreb's cycle forms how many molecules of NADH?

A 3

B 2

C 4

D 1

107

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Q 109

The flagella of a prokaryotic and eukaryotic cell vary in which of the following?

A

Mode of functioning and location in the cell

B

Types of movement and placement in the cell

C

Microtubular organization and function

D

Microtubular organization and type of movement

108

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Q 110

Which of the following is NOT an example of evidence supporting the endosymbiotic theory?

A

Mitochondria and other plastids multiply by binary fission.

B

Mitochondria contain their own DNA, which is a single circular chromosome.

C

Mitochondria have their own ribosomes, which are 70s.

D

none of these

109

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Q 111

The carbon dioxide transported in the form of carbonate ions is:

A 30%

B 50%

C 70%

D 95%

110

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Q 112

The canal system in sponges develops due to which of the following?

A

Porous walls

B

Gastrovascular system

C

Reproduction

D

Folding of inner walls

111

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Q 113

Your neighbor has a flower garden in which there are red flowers and white flowers. These flowers are diploid organisms, and flower color is an autosomal trait. The gene for red flowers (R) is dominant, while the gene for white flowers (r) is recessive. Which of the following is the genotype of a white flower?

A RR

B Rr

C rR

D rr

112

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Q 114

Which of the following was considered as a missing link between reptiles and birds?

A Pteranodon

B Avimimus

C Caudipteryx

D Archaeopteryx

113

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Q 115

The right side of the body is controlled by:

A left cerebral hemisphere

B right cerebral hemisphere

C Hippocampus

D Corpus callosum

114

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Q 116

Which of the following cell structure contains the highest concentration of RNA?

A centriole

B nucleus

C nucleolus

D mitochondria

115

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Q 117

The pair of salivary glands located behind the jaws is called:

A

Sublingual gland

B

Submaxillary glands

C

parotid glands

D

adrenal glands

116

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Q 118

Which of the following would not be expected during pregnancy?

A Maintenance of the corpus luteum

B Formation of the placenta

C Blastocyst implantation

D Formation of the corpus albicans

117

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Q 119

During lytic cycle how many phages are released from infected host cell?

A

100-300

B

100-500

C

100-200

D

100-400

118

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Q 120

The product of succinic acid by the action of the enzyme is which of the following?

A fumaric acid

B malonic acid

C citric acid

D pyruvic acid

119

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Q 121

What is the property of the part of a cell membrane which is in contact with external and internal environment?

A hydrophobic

B hydrophilic

C neutral

D both a and b

120

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Q 122

Esters of fatty acids with higher alcohols other than glycerol are called____

A

Waxes

B

Fats

C

Both (A) and (B)

D

None of these

121

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Q 123

Which of the following would most greatly increase the activity of an enzyme functioning in the small intestine?

- A Decrease the temperature
- B Increase the amount of enzymes
- C Decrease the pH
- D Increase the amount of substrate

122

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Q 124

Which of the following joint is also known as ellipsoidal joint?

A

Saddle joint

B

Condylloid joint

C

Ball and socket joint

D

None of these

123

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Q 125

dx/dt is rate of change of concentration with respect to

A Temperature

B Pressure

C time

D None of these

124

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Q 126

Which of the following reaction is used in the preparation of vegetable ghee from oil?

A Hydration

B Sulphonation

C Hydrogenation

D Dehydrogenation

125

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Q 127

From which of the following sources acetic acid was first isolated ?

A Butter

B Milk

C Cheese

D Vinegar

126

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Q 128

Current in electrolysis is carried through

A Free electrons

B Positive Ions

C Negative Ions

D Both B and C

127

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Q 129

Methanol is also called as

A liquor

B grain alcohol

C wood spirit

D fuel

128

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Q 130

The group which leaves from the substrate in a nucleophilic substitution reaction is called as ___?

A

Leaving group

B

Electrophile

C

Substrate

D

Weak nucleophile

129

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Q 131

If Water is present on a cup placed on a table, what will be the system in this case?

A

Water

B

Water in cup

C

Whole table

D

All of these

130

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Q 132

Molecules of liquids are in constant state of motion, it causes

A diffusion

B evaporation

C melting

D both A & B

131

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Q 133

In Haber's process the final product ammonia is converted into

A

solid state

B

Liquid state

C

gaseous state

D

None of these

132

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Q 134

Definite Shape of NaCl crystal is its

A

Characteristic

B

Symmetry

C

Habit

D

All of these

133

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Q 135

Which of the following element is present in all proteins ?

A

S

B

C

C

N

D

O

134

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Q 136

The ionic radii appeared to be a/an property

A

associative

B

multiplicative

C

additive

D

all of these

135

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Q 137

Phenol is also called as?

A

Carbonic acid

B

Carbolic acid

C

Acetic acid

D

Hydroxy acid

136

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Q 138

Cl-Cl Bond distance is is 5.63 Å, While Na-Cl bond distance is

A

Half of 5.63

B

double to 5.63

C

5.63

D

None of these

137

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Q 139

What pressure of Oxygen is maintained inside the bomb calorimeter?

A

200 atm

B

25 atm

C

20 atm

D

75 atm

138

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Q 140

The strongest acid among the following is

A

carbolic acid

B

H₂O

C

Methanol

D

Butanoic acid

139

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Q 141

Fruity smell of organic compounds is because of _____?

A

Alcohols

B

Carboxylic acid

C

Ester

D

Acidhalids

140

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Q 142

Globulins protein upon hydrolysis yield amino acids or their derivatives, so they belong to which type of protein

A

Derived proteins

B

Compound proteins

C

Conjugated proteins

D

Simple proteins

141

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Q 143

When a molten salt is electrolyzed the products are

A Complex

B Predictable

C Unpredictable

D All of these

142

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Q 144

In $\text{S}_\text{N}2$ reaction, which of the following specie is formed?

A Transition state

B Intermediate

C Carbocation

D Carbanion

143

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Q 145

What is the correct general formula of Grignard reagent?

A

RMX

B

R_2MgX

C

RMgX_2

D

RMgX

144

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Q 146

What is the hybridization state of carbon in benzene?

A sp^2

B sp^3

C sp

D All of these

145

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Q 147

The bonding pair of electron are equally shared b/w the atoms in

A

HF

B

HCl

C

H₂O

D

H₂

146

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Q 148

The maximum probability of finding an electron is at distance of

A

0.53mm

B

0.53nm

C

0.153nm

D

1.53mm

147

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Q 149

Graphite has a structural similarity with

A

B_2H_6

B

B_4C

C

B

D

BN

148

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Q 150

Ethanol having 10% methanol in it is called as_____?

A

Absolute alcohol

B

Methylated alcohol

C

Rectified spirit

D

Pure alcohol

149

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Q 151

If elements have high ionization energy value then it means they belong to

A metals

B non metals

C metalloid

D noble gases

150

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Q 152

How will the conditions be changed to prevent the volume of the given gas from expanding when its mass is increased

- A temperature and pressure increased
- B temperature is lowered and pressure decreased
- C temperature and pressure increased
- D temperature is lowered and pressure increased

151

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Q 153

Reaction which are completed in steps must contain

A Rate determining Step

B Slowest step

C fastest step

D Both A and B

152

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Q 154

When a catalyst is added to a reversible reaction, at equilibrium state the value of equilibrium constant

A

decreases

B

Increases

C

Remains unchanged

D

First decrease then increase

153

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Q 155

How much amount of methane does Natural gas contains?

A

0.8

B

0.85

C

0.7

D

0.98

154

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Q 156

SI unit for energy change in a chemical reaction is

A

Joule/mole

B

KJ/mole

C

KJ mol⁻¹

D

All of these

155

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Q 157

For Ideal gases the molar concentration can be expressed as their

A

Volume

B

density

C

partial pressure

D

temperature

156

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Q 158

Which enzyme is used for diagnosis of Jaundice ?

A

LDH-1

B

Protease

C

Alkaline phosphatase

D

None of these

157

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Q 159

In oxidation number method the final step to balance equation is

A

Hit and Trial Method

B

Inspection method

C

Identifying the reducing participants

D

Identifying the oxidized participants

158

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Q 160

What is the range of Azimuthal Quantum number(l)?

A to n

B to s

C to $n-1$

D to $s-1$

159

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Q 161

How many hydrogen atoms are attached to tertiary carbon in tertiary butyl alcohol?

A 3

B 2

C 1

D 0

160

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Q 162

The unhybridized p orbitals of benzene are present in the form of _____?

A

Between the C-C bonds of benzene

B

Above and below the carbon bonds

C

In the form of cloud above and below the benzene ring

D

None of these

161

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Q 163

On which factors the vapour pressure of a substance does not depend?

A Physical state of matter

B Intermolecular forces

C Surface area

D Temperature

162

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Q 164

SI unit for energy change in a chemical reaction is

A Joule/mole

B KJ/mole

C KJ mol⁻¹

D All of these

163

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Q 165

Which of the following can form a chelate

A

Ammine

B

Oxalate

C

Carbonyl

D

Cyano

164

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Q 166

In the reaction of NaBH_4 with aldehyde and ketones, which of the following act as Nucleophile ?

A

B^-

B

H^-

C

BH_2^-

D

NaBH_3^-

165

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Q 167

Actual yield is always less than theoretical yield due to

A

operational losses

B

reaction reversibility

C

side reaction

D

all of these

166

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Q 168

Which of the following alkyl halide give S_N1 reactions?

A

1-chloropropane

B

2-chloropropane

C

n-butyl chloride

D

2-methyl,2-chloropropane

167

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Q 169

which one the characteristic of Ionic solids ?

A

high vapor pressure

B

good conductivity

C

low melting point

D

solubility in polar solvents

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Q 170

Which one of them have high melting point?

A diamond

B sulphur

C ice

D zinc

169

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Q 171

Grignard reagent is produced by the reaction of Alkyl halides with_____?

A Ca in anhydrous ether

B Mg in dry ether

C Mg in hydrous ether

D Ca in dry ether

170

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Q 172

Who rejected vital force theory

A

Wohler

B

Berzelius

C

Wallis

D

Lyll

171

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Q 173

The alkenes can be formed by alcohols in the presence of

A

acidified KMnO_4

B

acidified $\text{K}_2\text{Cr}_2\text{O}_7$

C

acidified CuCl_2

D

pyridine

172

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Q 174

If a certain atom gains electrons its oxidation number will be

A Negative

B Positive

C zero

D Unity

173

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Q 175

Ethyne molecule is formed when:

- A When two sp hybridized orbitals combine
- B When two sp^2 hybridized orbitals combine
- C When two sp^3 hybridized orbitals combine
- D When two sp^2d hybridized orbitals combine

174

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Q 176

After the hydrolysis of ester the change in concentration of acid at different intervals is calculated by

A

Titration with KMnO_4

B

Titration With Standard Alkali

C

Distillation

D

Evaporation of mixture

175

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Q 177

The sum of mole fraction of the gases in a mixture of gases is

A always greater than 1

B always smaller than 1

C may be equal or less than 1

D always 1

176

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Q 178

The total number of transition elements are?

A

48

B

32

C

58

D

28

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Q 179

Which type of carboxylic acid is produced from the hydrolysis of nitriles?

A

Beta-hydroxy carboxylic acids

B

Acids having one carbon more than the starting material

C

Acids having one carbon less than the starting material

D

Alpha-hydroxy acids

178

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Q 180

Quantum number values for 2p orbitals are

A $n = 2, l = 1$

B $n = 1, l = 2$

C $n = 1, l =$

D $n = 2, l =$

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Q 181

His pants ____ torn during the match.

A is

B are

C were

D was

180

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Q 182

When I heard the news about you, I _____ (become) anxious.

A become

B became

C will be

D be

181

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Q 183

Choose the correct spelling of the word

A arround

B arond

C arund

D around

182

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Q 184

I _____ English since my childhood.

A

study

B

am studying

C

have been studying

D

studied

183

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Q 185

There are eleven players on a football _____

A

game

B

pitch

C

team

D

group

184

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Q 186

Choose the correct sentence.

A Why can't I speak to Ms. Parvin today!

B Why can't I speak to Ms. Parvin today?

C Why cant I speak to Ms. Parvin today?

D Why can't i speak to Ms. Parvin today?

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Q 186

Choose the correct sentence.

A Why can't I speak to Ms. Parvin today!

B Why can't I speak to Ms. Parvin today?

C Why cant I speak to Ms. Parvin today?

D Why can't i speak to Ms. Parvin today?

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Q 187

There _____ many objections to the plan.

A is

B are

C was

D be

186

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Q 188

Danial is playing tennis _____ Sunday.

A in

B on

C at

D of

187

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Q 189

Your pen is _____ the box.

A in

B into

C inside

D None

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Q 190

She _____ the mug on the counter.

A

set

B

sit

C

seat

D

sat

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Q 191

How ridiculous this is!

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

190

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Q 192

The baby cried most of _____ night.

A

a

B

an

C

the

D

no article

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Q 193

Never _____ the weather been so bad in the months of June and July.

A has

B have

C had

D have been

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Q 194

Jack is six years old, but he _____ French and Spanish.

A speaking

B is speaking

C speaks

D speak

193

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Q 195

The baby was obviously getting too hot, then Sam did what he could to cool her.

A

hot, then Sam did

B

hot, Sam did

C

hot; Sam, therefore, did

D

hot; Sam therefore trying to do

194

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Q 196

Choose the correct sentence.

A I can't see Tims car, there must have been an accident.

B I can't see Tim's car, there must have been an accident.

C I can't see Tims car there must have been an accident.

D I can't see Tims car; there must have been an accident.

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Q 197

There ____ many difficulties regarding the situation.

A should

B was

C were

D is

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Q 198

_____ ozone layer will disappear if we don't find _____ way to save it.

A The...the

B The...an

C The...a

D A... a

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Q 199

catalyst

A

alluring

B

person or thing that causes a change

C

enticing

D

absolving

198

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Q 200

Choose the present indefinite tense form of the sentence. "He had been sleeping."

A He has been sleeping.

B He had slept.

C He has slept.

D He sleeps.

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Q 201

Fact 1 A boy have a four cars Fact 2 Two of the cars are red Fact 3 He have one sports car If the above three statements are facts than which of the following statement will also be a fact I. The boy have red sports car II. He have 2 corolla III. His favorite color is red

A Only I and II

B Only II

C Only III

D None of the statement is a fact

200

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Q 202

23rd letter of English alphabets is

A

X

B

W

C

Z

D

Y

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Q 203

From the following, which one is an odd pair?

A

Petrol- Car

B

Oil - Lamp

C

Coal - Engine

D

Smoke_ Fire

202

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Q 204

Statement: The police authority has recently caught a group of house breakers. The citizens group in the locality have started night vigil in the area.

- A Statement I is the cause and statement II is its effect.
- B Statement II is the cause and statement I is its effect
- C Both the statements I and II are independent causes
- D Both the statements I and II are effects of some common cause

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Q 205

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A Both of them follows

B None of them follows

C Only I follows

D Only II follows

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Q 206

Which word does not belong to others?

A Tiger

B Leopard

C Duck

D Elephant

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Q 207

Statements Should admission to the professional degrees in Pakistan be given only on merit without any concession to any particular group of students? Arguments (I) Yes. This will improve the quality of the professional institutes and degrees as they will be able to complete the degree successfully. (II) No. This will keep a large number of socially and economically backward students out of the reach of professional institutes and degrees.

- A If argument I is strong.
- B If only argument II is strong
- C If both I and II are strong.
- D If neither I nor II is strong

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Q 207

Statements Should admission to the professional degrees in Pakistan be given only on merit without any concession to any particular group of students? Arguments (I) Yes. This will improve the quality of the professional institutes and degrees as they will be able to complete the degree successfully. (II) No. This will keep a large number of socially and economically backward students out of the reach of professional institutes and degrees.

- A If argument I is strong.
- B If only argument II is strong
- C If both I and II are strong.
- D If neither I nor II is strong

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Q 208

Statement The Management of School M has decided to give free breakfast from next academic year to all the students in its primary section through its canteen even though they will not get any government grant. Courses of Action (I) The school will have to admit many poor students who will seek admission for the next academic year. (II) The canteen facilities and utensils have to be checked and new purchases to be made to equip it properly. (III) Funds will have to be raised to support the scheme for years to come.

A Only II and III follows

B Only III and I follow

C Only I and II follow

D Only I follows

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Q 209

Complete the series A2.5, B5, C7.5, _____?

A

D9

B

D10

C

D9.5

D

D45

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Q 210

Statement: Rural and semi urban areas in the country have been suffering due to load shedding for quite some time. If the government is not able to overcome the power crisis, load shedding will be extended even to the urban areas.

- A Statement I is the cause and statement II is its effect.
- B Statement II is the cause and statement I is its effect
- C Both the statements I and II are independent causes
- D Both the statements I and II are effects of some common cause

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Q1 Decrease in velocity per unit time is called

A acceleration

B positive acceleration

C deceleration

D uniform acceleration

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Question 2/210

Q2

The black body always _____ radiations

A

emit

B

absorb

C

both a and b

D

reflects

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Q3

When an ideal gas of constant mass is heated in a container of fixed volume. What is the reason for the increase in pressure of the gas?

A

number of molecules per unit volume increases

B

molecules occupy greater volume of the container

C

average force per impact at the container wall increases

D

molecules collide with each other with greater force



Question 4/210

Q4

The value for ϵ_r for air is:...

A

1.6

B

1.06

C

1.006

D

1.0006

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Q5

Magnetic field along the axis of solenoid with n turns per unit length carrying current I is given by

A

$$B = \mu_0 n I$$

B

$$B = \mu_0 N / L$$

C

$$B = \mu_0 I N$$

D

$$B = \mu_0 I N L$$

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Question 6/210

Q6

Centrifuge is used to purify

A

U

B

H

C

O

D

N

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Question 7/210

Q7 A current of 5A flows in a resistor of 2 ohms. Calculate the energy dissipated in 300 seconds in the resistor.

A 5KJ

B 10KJ

C 15KJ

D 20 KJ

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Question 8/210

Q8

Half wave rectifier uses

A

one diode

B

two diode

C

three diodes

D

Four diodes

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Question 9/210

Q9

Work done by friction

A

can be zero

B

can be positive

C

can be negative

D

all of these

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Q10

As the wavelength of light used increases, the distance between bright fringes in the interference pattern:....

A

increases

B

decreases

C

remains same

D

none of these

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Q11

A fraction of internal energy is due to the molecular vibration, which is different in different states of matter. Which of the following gives the correct order of fraction of internal energy due to molecular vibration?

A

solid > gas > liquid

B

gas > liquid > solid

C

solid > liquid > gas

D

gas > liquid > solid



Q12

Transformer is used in rectification to _____ the supply voltage

A

step up

B

step down

C

equalize

D

none of them

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Q13

When the length of the conductor is doubled and the area of cross-section remains the same then its resistance

A

Remains the same

B

Will be doubled

C

Will become half

D

Will increase by four times

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Q14

_____ are such nuclei of an element that have the same atomic number Z , but have different mass number A

A

isotopes

B

isobars

C

isomers

D

isotherms

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Q15

One radian is equal to:

A

57.3 degrees

B

47.3 degrees

C

67.5 degrees

D

59.5 degrees

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Q16

Which group consists of only electromagnetic waves:

A

microwaves, radio waves, infra red

B

microwaves, radio waves, sound

C

microwaves, water waves, infra red

D

n/a



Q17

Motional emf induced in a coil is dependent on

A

Magnetic field

B

orientation

C

length

D

all of these

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Q18

The maximum velocity of SHM is a_0 the period of oscillation is

A

$$2\pi x_0/a_0$$

B

$$2\pi a_0/x_0$$

C

$$2\pi a_0 x_0$$

D

$$2\pi/a_0 x_0$$

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Q19

The electric intensity between two oppositely charged electric plates is:.....

A

$$E = \epsilon_0 / \sigma$$

B

$$E = \sigma + \epsilon_0$$

C

$$E = \sigma / \epsilon_0$$

D

$$E = \sigma \epsilon_0$$

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Question 20/210

Q20

A charge of 2 C placed in electric field of 10 N/C what will be the work done in moving charge a distance of 5 m

A

100 J

B

50 J

C

150 J

D

200 J

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Q21

Determine the angular velocity if 4.8 revolutions are completed in 4 seconds

A

9.6 radians/sec

B

7.5 radians/sec

C

8 radians/sec

D

0.96 radians/sec

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Q22

You have three capacitors, each of $2\ \mu\text{C}$. In which of the following combinations of the three capacitors, the resultant capacitance is $6\ \mu\text{C}$?

A

all three capacitors in series

B

two capacitors are in series, one in parallel

C

two capacitors are in parallel, one in series

D

all three capacitors in parallel



Q23

Which of the following can have negative temperature coefficient?

A

Compounds of silver

B

Liquid metals

C

Metallic alloys

D

Electrolytes

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Q24

An a.c. generator consists of a coil of 50 turns and an area 2.5 m^2 rotating at an angular speed of 60 rad s^{-1} in a uniform magnetic field of 0.3 T between two fixed pole pieces. What is the flux through the coil, when the current is zero

A

Maximum

B

Minimum

C

Zero

D

Independent



Q25

Isothermal system has constant

A

Temperature

B

Pressure

C

Entropy

D

Energy Conservation

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Q26

Magnetic field lines form _____ loops from pole to pole.

A

open

B

closed

C

branched

D

opened or closed

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Question 27/210

Q27

A 4kg eagle picks up a 75g snake and raises it 2.5 m from the ground to a branch. What is the work done by the eagle on the snake? (Assume $g = 10 \text{ m/s}^2$)

A

100 J

B

1.875 J

C

18.75 J

D

187.5 J

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Q28

What is 30 degrees in radians?

A

 $\pi/3$

B

 $\pi/6$

C

 $\pi/2$

D

 $\pi/4$ [< Previous Question](#)[Next Question >](#)



Question 29/210

Q29

A particle moves from point $P(1,2,3)$ to $Q(2,1,4)$ under the action of a constant force $F = (2i + j + k)$, work done by force is

A

2 J

B

4 J

C

16 J

D

8 J

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Q30

Electrostatic force is

A

Nonconservative

B

Conservative

C

depends on shape of charge

D

None of these

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Q31

The stationary waves can be set up on the string only with the frequencies of harmonic series determined by:

A

the tension, length and mass per unit length of the string

B

the tension and mass per unit length of the string only

C

the length and mass per unit length of the string only

D

the tension and length of the string only



Q32

What is angular velocity?

A

Change in angular rotation / change in time

B

Change in displacement / change in time

C

Change in speed / change in time

D

Change in acceleration / change in time



Q33

Consider a peak rectifier fed by a 60-Hz sinusoid having a peak value $V_p = 100$ V. Let the load resistance $R = 10$ k Ω . Calculate the fraction of the cycle during which the diode is conducting

A

1.06 %

B

2.06%

C

3.18 %

D

4.82%



Q34

Which of the following is the statement of first law of thermodynamics?

A

difference between heat given to the system and work done by the system appears as internal energy of the system

B

difference between work done and change in internal energy is equal to the heat absorbed by the system

C

sum of heat absorbed and the increase in internal energy is equal to the work done by the system

D

sum of heat absorbed and the work done by the system is equal to the decrease in internal energy of the system



Q35

The half life of radioactive element is

A

0.693λ

B

$0.693/\lambda$

C

$\lambda/0.693$

D

$1/\lambda$

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Q36

Whenever a transverse wave travelling in a denser medium, is reflected from the boundary of the rarer medium...

A

An incident crest on reflection disappears

B

An incident trough on reflection becomes double

C

An incident crest on reflection becomes a trough

D

An incident crest on reflection remains crest



Question 37/210

Q37

If the length of a potentiometer wire is doubled, the accuracy in determining the null point _____

A

is increased

B

is decreased

C

remains constant

D

may increase or decrease

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Q38

Energy stored inside the inductor is given by

A

$$\frac{1}{2}LI^2$$

B

$$LI^2$$

C

$$\frac{3}{2}LI^2$$

D

$$LI$$

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Q39

The coupling coefficient of perfectly coupled coil is

A

zero

B

1

C

more than 1

D

infinite

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Q40

The distance between two consecutive nodes in a stationary wave is equal to:

A

one wavelength

B

2.5 wavelength

C

3 wavelength

D

half wavelength

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Q41

If two bodies have same temperature the rate of heat transfer between them is

A

infinite

B

zero

C

double the temperature

D

none of these

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Question 42/210

Q42

Bright Lines in pattern shows

A

absorption

B

emission

C

release

D

free particle

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Question 43/210

Q43

Nucleus absorbs

A

x rays

B

beta rays

C

gamma rays

D

all of these

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Q44

The total mass of protium deuterium and tritium is ___ than three H atoms

A

3 neutrons

B

3 protons

C

3 electrons

D

none of these

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Q45

A container is filled with oxygen and helium at the same temperature. The molar mass of oxygen is 32 g/mol and that of helium is 4 g/mol. What is the ratio: average speed of oxygen molecules -----
----- average speed of helium molecules

A

$$1 : \sqrt{8}$$

B

$$\sqrt{8}$$

C

$$1 : 8$$

D

$$8$$



Question 46/210

Q46

Laser light is a type of

A

spontaneous

B

stimulated

C

both a) and b)

D

None of these

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Q47

The energy input to an engine is 60 J, and the work it performs is 15 J. What fraction of the energy input is expelled to the cold reservoir?

A

0.25

B

75%

C

1

D

impossible to determine



Q48

Vector is quantity which

A

has direction

B

has magnitude

C

follow rules of vector addition

D

both direction and magnitude

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Q49

To get a peak load voltage of 40V out of a bridge rectifier, what should be the approximate rms value of secondary voltage?

A

0V

B

14.4V

C

28.3V

D

56.6 V

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Q50

After certain lapse of time, the fraction of radioactive polonium is found to be 12.5% of initial quantity. If the half life of polonium is 138 days, then duration of time lapse is.....days

A

34.5

B

276

C

414

D

125

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Q51

1 weber is equal to

A

10 Gauss

B

 10^8 Maxwell

C

 10^{-4} Gauss

D

 10^4 Maxwell[< Previous Question](#)[Next Question >](#)



Q52

In a periodic wave, the distance between second and fifth crests is 15 cm, what is the wavelength of the wave?

A

45 cm

B

5 cm

C

 $1/5$ cm

D

 $1/3$ cm[< Previous Question](#)[Next Question >](#)



Q53

Steady current does not change with respect to _____.

A

conductor

B

source

C

time

D

potential difference

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Q54

Lymph nodes may be located in the human body in the tissues of the:

A

stomach

B

thyroid gland

C

brain

D

groin and neck

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Question 55/210

Q55

A condition with abnormal amount of fats is called:

A

anorexia

B

botulism

C

piles

D

obesity

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Q56

The first layer of cell wall which is formed is called?

A

primary wall

B

secondary wall

C

middle lamella

D

all of these

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Question 57/210

Q57

In enzymatic mechanism, the substrate bind to enzyme active site to produce?

A

reactants

B

enzymes

C

products

D

all of these

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Q58

A structural component that is found in all viruses is?

A

envelope

B

DNA

C

Capsid

D

Tail Fibers

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Q59

Which of the following carbohydrate is a tasteless molecule?

A

Monosaccharides

B

Oligosaccharides

C

Polysaccharides

D

carbohydrates

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Q60

What are Autophagosomes?

A

Those lysosomes which eat parts of their own cells to generate energy.

B

Those lysosomes which eat old and worn out cellular organelles.

C

Lysosomes which help in extracellular digestion

D

both a and b



Q61

Which of the following is a chemical link between catabolism and anabolism?

A

AMP

B

ATP

C

ADP

D

All of these

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Question 62/210

Q62

Irreversible modifications require the synthesis of which of the following?

A

enzymes

B

carbohydrates

C

vitamins

D

proteins

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Question 63/210

Q63

Some bacteria ranging occasionally a size of 500 um in length are which of the following?

A

Escherichia coli

B

Mycoplasma

C

Epulopiscium

D

Spirochetes

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Q64

The only aquatic arthropods:

A

Crustaceans

B

Arachnids

C

Myriapods

D

Gastopods

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Q65

Chromosomes that have different alleles of a given gene at locus is called?

A

homozygous

B

X chromosomes

C

Y chromosomes

D

heterozygous

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Question 66/210

Q66

A neuron located in the central nervous system that projects its axon outside the CNS is called:

A

Motor nerve

B

sensory nerve

C

Both A and B

D

Mixed nerve

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Question 67/210

Q67

What is the function of the fluid secreted by sertoli cells?

A

provides liquid medium

B

Provides protection to sperms

C

Provides nourishment to sperms

D

All A,B and C are correct

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Q68

All the animals of the grade radiata are which of the following?

A

Unicellular

B

Triploblastic

C

both a and b

D

Diploblastic

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Q69

Which of the following changes length during sarcomere contraction?

A

Thick filaments

B

Thin filaments

C

H zone

D

all of these

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Q70

HIV AIDS is caused by which viruses?

A

human immunodeficiency virus

B

retroviruses

C

influenza Virus

D

paramyxoviruses

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Question 71/210

Q71

First Actions spectrum was obtained by using?

A

Algae

B

Fungi

C

Bacteria

D

Spirogyra

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Q72

Refers to the final changes within an immature virion that result in an infectious virus particle

A

assembly

B

coating

C

integration

D

maturation

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Question 73/210

Q73

Which of the following is inherited via an autosomal recessive allele?

A

Hemophilia

B

Color-blindness

C

Huntington's disease

D

Cystic fibrosis

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Q74

Most reflex arcs are:

A

Monosynaptic reflex

B

Polysynaptic reflex

C

Hemi Synaptic reflex

D

None of these



Question 75/210

Q75

The brain is protected and brain tissue is provided with nutrients and oxygen by?

A

cranium

B

meninges

C

skull

D

ventricles

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Q76

Which of the following is the key function of pleural cavity?

A

Reduces friction between membranes

B

Slide easily on one another

C

allows membrane to adhere on one another

D

all of these are correct



Question 77/210

Q77

The calvin cycle begins when carbon dioxide reacts with?

A

NAD

B

ADP

C

FADH

D

RUBP

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Question 78/210

Q78

What type of bonds exist between an enzyme and its prosthetic group?

A

Ionic

B

Covalent

C

Hydrogen

D

Metallic

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Question 79/210

Q79

Spirochete is an example of which type of bacteria?

A

aerobic

B

facultative

C

anaerobic

D

both a and b

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Question 80/210

Q80

All DNA virus replicate in the nucleus?

A

yes all

B

no

C

yes but some exceptions

D

they replicate in cytoplasm

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Q81

Upon increasing the temperature the shape of enzyme's active site?

A

remains same

B

changes

C

adopts a geometric conformation

D

denatures

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Question 82/210

Q82

Medulla, pons and cerebellum are found in which brain part?

A

Corpus callosum

B

Hindbrain

C

Forebrain

D

Midbrain

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Q83

The place of centromere where spindle fibres get attached is?

A

Kinetochores

B

telomere

C

Centromere region

D

all of these

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Q84

The enzyme involved in splitting or formation of C-C bond is called?

A

oxidases

B

dehydrogenases

C

transglycosidases

D

desmolases

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Q85

This group of animals has three bones in the ear.

A

Reptiles

B

Mammals

C

Both reptiles and mammals

D

Birds and mammals

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Question 86/210

Q86

The M-line is part of the cytoskeleton that stabilizes each:

A

Microtubules

B

sarcolemma

C

Sarcomere

D

None of these

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Q87

Spermatids differentiate into:

A

Spermatozoa

B

secondary spermatocyte

C

primary oocyte

D

mature sperms

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Q88

The mobility of integral proteins can be measured by physical state of which of the following?

A

amino acids

B

external phospholipids

C

membrane phospholipids

D

membrane appendages



Question 89/210

Q89

Cells release various cellular secretions to facilitate bodily functions. Most of the cellular secretions are?

A

Glycoproteins

B

glycolipids

C

Nucleohistones

D

Carbohydrates

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Q90

Which of the following is universal donor?

A

A

B

B

C

AB

D

O

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Q91

Which group of animals is not a deuterostome?

A

Echinodermata

B

Arthropoda

C

Mollusca

D

Both B and C

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Q92

SI unit for energy change in a chemical reaction is

A

Joule/mole

B

KJ/mole

C

KJ mol⁻¹

D

All of these

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Q93

What is the least common electron transport chain?

A

non-cyclic electron flow

B

cyclic electron flow

C

circular electron flow

D

both b and c

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Q94

Identify the characteristic of acoelomates?

A

Absence of mesoderm

B

Absence of brain

C

Coelom that is incompletely lined with a mesoderm

D

Solid body without a cavity surrounding internal organs

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Question 95/210

Q95

Which of the following constitute large organic molecules?

A

Cellulose

B

glucose

C

amino acids

D

all of these

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Question 96/210

Q96

Which of the following organelles is not bound by a membrane?

A

ribosomes

B

ER

C

Mitochondria

D

nucleus

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Q97

How are high energy phosphate bonds broken down in ATP?

A

anabolism

B

catabolism

C

hydrolysis

D

all of these

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Q98

Prokaryotes are considered to be evolved how many years ago?

A

1.5 billion years ago

B

4.5 billion years ago

C

1000 million years ago

D

3.5 billion years ago

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Question 99/210

Q99

Each Kreb's cycle forms how many molecules of NADH?

A

3

B

2

C

4

D

1

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Q100

The flagella of a prokaryotic and eukaryotic cell vary in which of the following?

A

Mode of functioning and location in the cell

B

Types of movement and placement in the cell

C

Microtubular organization and function

D

Microtubular organization and type of movement

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Q101

Which of the following is NOT an example of evidence supporting the endosymbiotic theory?

A

Mitochondria and other plastids multiply by binary fission.

B

Mitochondria contain their own DNA, which is a single circular chromosome.

C

Mitochondria have their own ribosomes, which are 70s.

D

none of these



Q102

The carbon dioxide transported in the form of carbonate ions is:

A

30%

B

50%

C

70%

D

95%

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Q103

The canal system in sponges develops due to which of the following?

A

Porous walls

B

Gastrovascular system

C

Reproduction

D

Folding of inner walls



Q104

Your neighbor has a flower garden in which there are red flowers and white flowers. These flowers are diploid organisms, and flower color is an autosomal trait. The gene for red flowers (R) is dominant, while the gene for white flowers (r) is recessive. Which of the following is the genotype of a white flower?

A RR

B Rr

C rR

D rr



Q105

Which of the following was considered as a missing link between reptiles and birds?

A

Pteranodon

B

Avimimus

C

Caudipteryx

D

Archaeopteryx

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Q106

Which of the following cell structure contains the highest concentration of RNA?

A

centriole

B

nucleus

C

nucleolus

D

mitochondria

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Q107

The pair of salivary glands located behind the jaws is called:

A

Sublingual gland

B

Submaxillary glands

C

parotid glands

D

adrenal glands

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Q107

The pair of salivary glands located behind the jaws is called:

A

Sublingual gland

B

Submaxillary glands

C

parotid glands

D

adrenal glands

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Q108

Which of the following would not be expected during pregnancy?

A

Maintenance of the corpus luteum

B

Formation of the placenta

C

Blastocyst implantation

D

Formation of the corpus albicans

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Question 109/210

Q109

During lytic cycle how many phages are released from infected host cell?

A

100-300

B

100-500

C

100-200

D

100-400

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Q110

The product of succinic acid by the action of the enzyme is which of the following?

A

fumaric acid

B

malonic acid

C

citric acid

D

pyruvic acid

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Q111

What is the property of the part of a cell membrane which is in contact with external and internal environment?

A

hydrophobic

B

hydrophilic

C

neutral

D

both a and b

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Question 112/210

Q112

Esters of fatty acids with higher alcohols other than glycerol are called _____

A

Waxes

B

Fats

C

Both (A) and (B)

D

None of these

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Q113

Which of the following joint is also known as ellipsoidal joint?

A

Saddle joint

B

Condyloid joint

C

Ball and socket joint

D

None of these



Question 114/210

Q114

dx/dt is rate of change of concentration with respect to

A

Temperature

B

Pressure

C

time

D

None of these

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Question 115/210

Q115

Which of the following reaction is used in the preparation of vegetable ghee from oil?

A

Hydration

B

Sulphonation

C

Hydrogenation

D

Dehydrogenation

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Q116

From which of the following sources acetic acid was first isolated ?

A

Butter

B

Milk

C

Cheese

D

Vinegar

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Q117

Current in electrolysis is carried through

A

Free electrons

B

Positive Ions

C

Negative Ions

D

Both B and C

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Q118

Methanol is also called as

A

liquor

B

grain alcohol

C

wood spirit

D

fuel

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Question 119/210

Q119

The group which leaves from the substrate in a nucleophilic substitution reaction is called as ___?

A

Leaving group

B

Electrophile

C

Substrate

D

Weak nucleophile

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Q120

If Water is present on a cup placed on a table, what will be the system in this case?

A

Water

B

Water in cup

C

Whole table

D

All of these

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Q121

In Haber's process the final product ammonia is converted into

A

solid state

B

Liquid state

C

gaseous state

D

None of these

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Q122

Definite Shape of NaCl crystal is its

A

Characteristic

B

Symmetry

C

Habit

D

All of these

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Q123

Which of the following element is present in all proteins ?

A

S

B

C

C

N

D

O

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Q124

The ionic radii appeared to be a/an property

A

associative

B

multiplicative

C

additive

D

all of these

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Q125

Phenol is also called as?

A

Carbonic acid

B

Carbolic acid

C

Acetic acid

D

Hydroxy acid

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Q126

Cl-Cl Bond distance is 5.63 Å, While Na-Cl bond distance is

A

Half of 5.63

B

double to 5.63

C

5.63

D

None of these

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Q127

What pressure of Oxygen is maintained inside the bomb calorimeter?

A

200 atm

B

25 atm

C

20 atm

D

75 atm

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Q128

Fruity smell of organic compounds is because of _____?

A

Alcohols

B

Carboxylic acid

C

Ester

D

Acidhalids

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Q128

Fruity smell of organic compounds is because of _____?

A

Alcohols

B

Carboxylic acid

C

Ester

D

Acidhalids

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Q129

Globulins protein upon hydrolysis yield amino acids or their derivatives, so they belong to which type of protein

A

Derived proteins

B

Compound proteins

C

Conjugated proteins

D

Simple proteins

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Q130

When a molten salt is electrolyzed the products are

A

Complex

B

Predictable

C

Unpredictable

D

All of these

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Q131

In S_N2 reaction, which of the following specie is formed?

A

Transition state

B

Intermediate

C

Carbocation

D

Carbanion

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Q132

What is the correct general formula of Grignard reagent?

A

 RMX

B

 R_2MgX

C

 RMgX_2

D

 RMgX [< Previous Question](#)[Next Question >](#)



Q133

What is the hybridization state of carbon in benzene?

A

 sp^2

B

 sp^3

C

 sp

D

All of these

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Q134

The bonding pair of electron are equally shared b/w the atoms in

A

HF

B

HCl

C

H₂O

D

H₂

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Question 135/210

Q135

Graphite has a structural similarity with

A

B_2H_6

B

B_4C

C

B

D

BN

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Q136

Ethanol having 10% methanol in it is called as _____?

A

Absolute alcohol

B

Methylated alcohol

C

Rectified spirit

D

Pure alcohol

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Q137

If elements have high ionization energy value then it means they belongs to

A

metals

B

non metals

C

metalloid

D

noble gases

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Q138

How will the conditions be changed to prevent the volume of the given gas from expanding when its mass is increased

A

temperature and pressure increased

B

temperature is lowered and pressure decreased

C

temperature and pressure increased

D

temperature is lowered and pressure increased



Q139

Reaction which are completed in steps must contain

A

Rate determining Step

B

Slowest step

C

fastest step

D

Both A and B

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Q140

When a catalyst is added to a reversible reaction, at equilibrium state the value of equilibrium constant

A

decreases

B

Increases

C

Remains unchanged

D

First decrease then increase

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Q141

How much amount of methane does Natural gas contains?

A

0.8

B

0.85

C

0.7

D

0.98

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Q142

For Ideal gases the molar concentration can be expressed as their

A

Volume

B

density

C

partial pressure

D

temperature

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Q143

In oxidation number method the final step to balance equation is

A

Hit and Trial Method

B

Inspection method

C

Identifying the reducing participants

D

Identifying the oxidized participants

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Q144

What is the range of Azimuthal Quantum number(l)?

A

to n

B

to s

C

to $n-1$

D

to $s-1$ [← Previous Question](#)[Next Question →](#)



Q145

How many hydrogen atoms are attached to tertiary carbon in tertiary butyl alcohol?

A

3

B

2

C

1

D

0

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Q146

The unhybridized p orbitals of benzene are present in the form of _____?

A

Between the C-C bonds of benzene

B

Above and below the carbon bonds

C

In the form of cloud above and below the benzene ring

D

None of these

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Q147

On which factors the vapour pressure of a substance does not depend?

A

Physical state of matter

B

Intermolecular forces

C

Surface area

D

Temperature

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Q148

Which of the following can form a chelate

A

Ammine

B

Oxalate

C

Carbonyl

D

Cyano

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Q149

In the reaction of NaBH_4 with aldehyde and ketones, which of the following act as Nucleophile ?

A

 B^-

B

 H^-

C

 BH_2^-

D

 NaBH_3^- [< Previous Question](#)[Next Question >](#)



Q150

Which of the following alkyl halide give S_N1 reactions?

A

1-chloropropane

B

2-chloropropane

C

n-butyl chloride

D

2-methyl,2-chloropropane

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Q151

which one the characteristic of Ionic solids ?

A

high vapor pressure

B

good conductivity

C

low melting point

D

solubility in polar solvents

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Q152

Which one of them have high melting point?

A

diamond

B

sulphur

C

ice

D

zinc

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Q153

Grignard reagent is produced by the reaction of Alkyl halides with _____?

A

Ca in anhydrous ether

B

Mg in dry ether

C

Mg in hydrous ether

D

Ca in dry ether

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Q154

Who rejected vital force theory

A

Wohler

B

Berzelius

C

Wallis

D

Lyll

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Q155

The alkenes can be formed by alcohols in the presence of

A

acidified KMnO_4

B

acidified $\text{K}_2\text{Cr}_2\text{O}_7$

C

acidified CuCl_2

D

pyridine

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Q156

If a certain atom gains electrons its oxidation number will be

A

Negative

B

Positive

C

zero

D

Unity

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Q157

After the hydrolysis of ester the change in concentration of acid at different intervals is calculated by

A

Titration with KMnO_4

B

Titration With Standard Alkali

C

Distillation

D

Evaporation of mixture

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Q158

The sum of mole fraction of the gases in a mixture of gases is

A

always greater than 1

B

always smaller than 1

C

may be equal or less than 1

D

always 1

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Q159

The total number of transition elements are?

A

48

B

32

C

58

D

28

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Q160

Which type of carboxylic acid is produced from the hydrolysis of nitriles?

A

Beta-hydroxy carboxylic acids

B

Acids having one carbon more than the starting material

C

Acids having one carbon less than the starting material

D

Alpha-hydroxy acids

[< Previous Question](#)[Next Question >](#)



Q161

Quantum number values for 2p orbitals are

A

 $n = 2, l = 1$

B

 $n = 1, l = 2$

C

 $n = 1, l =$

D

 $n = 2, l =$ [< Previous Question](#)[Next Question >](#)



Q162

His pants ____ torn during the match.

A

is

B

are

C

were

D

was

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Q163

When I heard the news about you, I _____ (become) anxious.

A

become

B

became

C

will be

D

be

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Q164

Choose the correct spelling of the word

A

arround

B

arond

C

arund

D

around

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Q165

There are eleven players on a football _____

A

game

B

pitch

C

team

D

group

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Q166

Choose the correct sentence.

A

Why can't I speak to Ms. Parvin today!

B

Why can't I speak to Ms. Parvin today?

C

Why cant I speak to Ms. Parvin today?

D

Why can't i speak to Ms. Parvin today?



Q167

There _____ many objections to the plan.

A

is

B

are

C

was

D

be

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Q168

Danial is playing tennis _____ Sunday.

A

in

B

on

C

at

D

of

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Q169

Your pen is _____ the box.

A

in

B

into

C

inside

D

None

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Q170

She _____ the mug on the counter.

A

set

B

sit

C

seat

D

sat

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Q171

How ridiculous this is!

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

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Q172

The baby cried most of _____ night.

A

a

B

an

C

the

D

no article

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Question 173/210

Q173

Never _____ the weather been so bad in the months of June and July.

A

has

B

have

C

had

D

have been

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Q174

Jack is six years old, but he _____ French and Spanish.

A

speaking

B

is speaking

C

speaks

D

speak

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Q175

The baby was obviously getting too hot, then Sam did what he could to cool her.

A

hot, then Sam did

B

hot, Sam did

C

hot; Sam, therefore, did

D

hot; Sam therefore trying to do



Q176

Choose the correct sentence.

A

I can't see Tims car, there must have been an accident.

B

I can't see Tim's car, there must have been an accident.

C

I can't see Tims car there must have been an accident.

D

I can't see Tims car; there must have been an accident.



Q177

There ____ many difficulties regarding the situation.

A

should

B

was

C

were

D

is

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Q178

_____ ozone layer will disappear if we don't find _____ way to save it.

A

The...the

B

The...an

C

The...a

D

A... a

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Q179

catalyst

A

alluring

B

person or thing that causes a change

C

enticing

D

absolving

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Q180

Choose the present indefinite tense form of the sentence. "He had been sleeping."

A

He has been sleeping.

B

He had slept.

C

He has slept.

D

He sleeps.



Q181

Fact 1 A boy have a four cars Fact 2 Two of the cars are red Fact 3 He have one sports car If the above three statements are facts than which of the following statement will also be a fact I. The boy have red sports car II. He have 2 corolla III. His favorite color is red

A

Only I and II

B

Only II

C

Only III

D

None of the statement is a fact



Question 182/210

Q182

23rd letter of English alphabets is

A

X

B

W

C

Z

D

Y

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Q183

From the following, which one is an odd pair?

A

Petrol- Car

B

Oil - Lamp

C

Coal - Engine

D

Smoke_ Fire

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Q184

Statement: The police authority has recently caught a group of house breakers. The citizens group in the locality have started night vigil in the area.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect

C

Both the statements I and II are independent causes

D

Both the statements I and II are effects of some common cause



Q185

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A

Both of them follows

B

None of them follows

C

Only I follows

D

Only II follows



Q186

Which word does not belong to others?

A

Tiger

B

Leopard

C

Duck

D

Elephant

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Q187

Statements Should admission to the professional degrees in Pakistan be given only on merit without any concession to any particular group of students? Arguments (I) Yes. This will improve the quality of the professional institutes and degrees as they will be able to complete the degree successfully. (II) No. This will keep a large number of socially and economically backward students out of the reach of professional institutes and degrees.

A If argument I is strong.

B If only argument II is strong

C If both I and II are strong.

D If neither I nor II is strong



Q188

Statement The Management of School M has decided to give free breakfast from next academic year to all the students in its primary section through its canteen even though they will not get any government grant. Courses of Action (I) The school will have to admit many poor students who will seek admission for the next academic year. (II) The canteen facilities and utensils have to be checked and new purchases to be made to equip it properly. (III) Funds will have to be raised to support the scheme for years to come.

A

Only II and III follows

B

Only III and I follow

C

Only I and II follow

D

Only I follows



Q189

Statement: Rural and semi urban areas in the country have been suffering due to load shedding for quite some time. If the government is not able to overcome the power crisis, load shedding will be extended even to the urban areas.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect

C

Both the statements I and II are independent causes

D

Both the statements I and II are effects of some common cause



Q190

Speed of the sound, v , in a medium of elastic modulus E and density d , is given by:

A

$$v = E/d$$

B

$$v = E \cdot d$$

C

$$v^2 = E \cdot d$$

D

$$v^2 = E/d$$

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Q191

Which lobe is the back part of the brain that is involved with vision?

A

Frontal

B

Parietal

C

Temporal

D

Occipital

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Q192

Which is an organelle that helps the sperm to penetrate the ovum?

A

Megalis

B

Zona pellucida

C

Acrosome

D

both a and b

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Q193

Molecules of liquids are in constant state of motion, it causes

A

diffusion

B

evaporation

C

melting

D

both A & B

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Q194

Actual yield is always less than theoretical yield due to

A

operational losses

B

reaction reversibility

C

side reaction

D

all of these

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Q195

I _____ English since my childhood.

A

study

B

am studying

C

have been studying

D

studied

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Q196

In this stage of photosynthesis, ATP and NADPH converted to ADP+Pi and NADP+

A

light dependent reaction

B

light independent reaction

C

both of these

D

none of above

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Question 197/210

Q197

The right side of the body is controlled by:

A

left cerebral hemisphere

B

right cerebral hemisphere

C

Hippocampus

D

Corpus callosum

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Q198

Which of the following would most greatly increase the activity of an enzyme functioning in the small intestine?

A Decrease the temperature

B Increase the amount of enzymes

C Decrease the pH

D Increase the amount of substrate

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Q199

SI unit for energy change in a chemical reaction is

A

Joule/mole

B

KJ/mole

C

KJ mol⁻¹

D

All of these

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Q200

When resources gets scarce, the population growth?

A

becomes fast

B

slows down

C

remains same

D

none of these

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Q201

Which of the following is a form of asexual reproduction in prokaryotic cells?

A

Binary fission and mitosis

B

Binary fission and meiosis

C

Binary fission and transformation

D

Binary fission

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Q202

The maximum probability of finding an electron is at distance of

A

0.53mm

B

0.53nm

C

0.153nm

D

1.53mm

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Question 203/210

Q203

Which enzyme is used for diagnosis of Jaundice ?

A

LDH-1

B

Protease

C

Alkaline phosphatase

D

None of these

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Q204

If a photon is absorbed by a nucleus the energy of nucleus

A

remain same

B

increase slightly

C

decrease slightly

D

it will pass the nucleus

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Q205

A stationary wave is formed in a pipe which is open at both ends. If length of pipe is 10 cm, then what is the maximum possible wavelength of the wave.

A 20 cm

B 5 cm

C 10 cm

D 30 cm

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Q206

Complete the series A2.5, B5, C7.5, _____?

A

D9

B

D10

C

D9.5

D

D45

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Q207

A neural pathway that controls an action reflex is called:

A

Nerve cell

B

reflex arc

C

Receptor cells

D

Mixed nerve

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Question 208/210

Q208

Cofactors can be divided into how many groups?

A

2

B

4

C

6

D

8

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Question 209/210

Q209

The strongest acid among the following is

A

carbolic acid

B

H₂O

C

Methanol

D

Butanoic acid

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Q210

Ethyne molecule is formed when:

A

When two sp hybridized orbitals combine

B

When two sp² hybridized orbitals combine

C

When two sp³ hybridized orbitals combine

D

When two sp²d hybridized orbitals combine